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BULLETIN OF INFORMATION

Concerning "The Future of Timber"

Supply of the United States' Land

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U. S. Department of Agriculture

Speciosa Catalpa

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(ILLUSTRATED)

THE SOLUTION OF THE
TIMBER PROBLEM

Catalpa Qualities and Uses.
Care and Cultivation.

"Profits in Catalpa Culture"

The Winfield Nursery Company

(INCORPORATED)

JOSEPH MONCRIEF, President

WINFIELD,

::

KANSAS

Genuine Speciosa Catalpa

25,000 Acres

Every twenty-four hours the railroads, manufacturers, and home builders of the United States demand twenty-five thousand acres of timber. That is, there is a daily consumption of all the wood the trees in twenty-five thousand acres can supply.

—Hon. J. Sterling Merton.

No Substitute

That iron, steel and concrete will eventually replace hardwood is an argument not borne out by the facts. In spite of the vast substitution of metal and concrete during the last ten years, consumption of timber of all kinds has steadily and rapidly increased and its market value has more than doubled.

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Winfield, Kansas

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WINFIELD, KANSAS



From Hall, Courtesy of U. S. Department of Agriculture.

A PLANTATION OF SPECIOSA CATALPA, SOUTHERN IOWA

Timber Culture

Farmers and investors are beginning to awaken to the fact that the planting of a part of their land to forest trees is profitable and necessary; profitable because the ever-increasing consumption of timber for posts, poles and lumber make for it a demand that will never fail, necessary because it secures the planter against the approaching timber famine.

Forestry farming has passed the experimental stage and is rapidly coming to be considered as necessary a part of up-to-date farming as are the regular agricultural crops. Actual results from tree planting, in small groves as well as large plantations, illustrations of which can be found in pages further on, go to prove that it is more profitable than any other farm product.

Forestry farming is also desirable, because the process of planting need not be repeated every year, but after it is once established it requires less care every year, while in turn it is ever becoming more valuable. It can be harvested at seasons that are ordinarily dull on the farm. Also the period of cutting is not confined to any small space of time.

There is no such thing as crop-failure with tree-planting. After planting, the tree will grow when the season is right; and will hold that growth during drought or unfavorable weather. And while its growth may be less because the season is unfavorable, yet there is no loss in what it has attained, as there is in grains and vegetables.

Tree-planting is also necessary to the preservation of our farming lands. If done rightly, it prevents the washing-away of the top soil, the roots absorb much moisture and cause the ground to hold much more, which in turn forms a constant supply for streams and brooks. Also by causing the ground to absorb the moisture, it prevents the constant washing, and forming of gullies and channels, while the rapid rises in rivers and streams cause such destructive floods.

Scarcity Every land-owner knows how difficult it
Timber is to procure fence posts, and the exceed-
Products ingly high prices that it is necessary to pay for
 telephone poles. And these conditions are bound to continue
 on account of the great increase in the demand, and the cor-
 responding shortening of the supply.

The United States Agricultural Department, the State
 Agricultural Departments and the different Forestry Societies,
 which are the most conservative and unbiased authorities,
 have, to a great extent, caused the present interest of the
 public in tree-planting, and make them realize the alarming
 timber situation of the country today.

Forestry Farming has been demonstrated to be profitable
 and necessary. The essential question, then, is to plant the
 most adaptable, the most profitable and the quickest-growing
 tree that there is.

That timber is the pure Speciosa Catalpa.

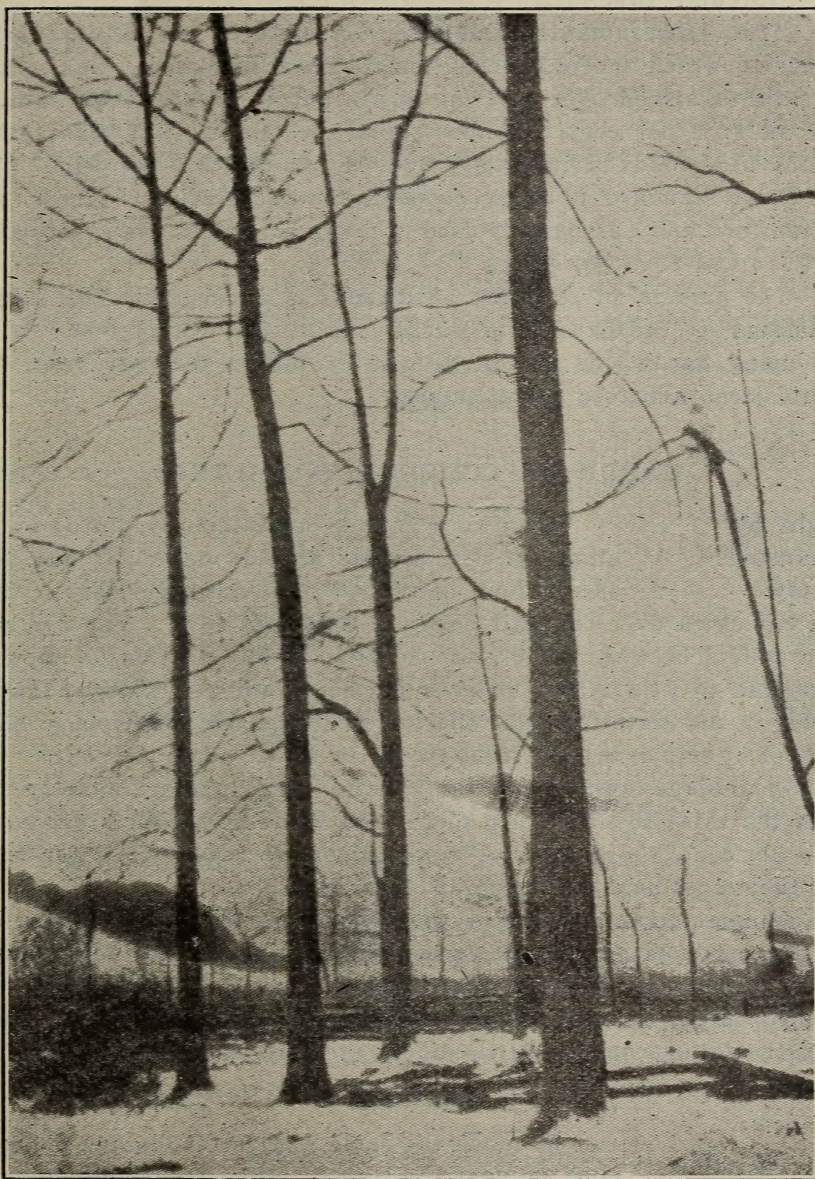
Speciosa Catalpa is the most adaptable known timber.
 It will attain sufficient size for fence-posts in a very few years;
 makes a post that does not check or split when stapled, and
 will grip a nail or spike longer than any other wood. Is
 likewise equal to most all hardwoods for cabinet-work, in-
 terior finish, and ornamental work.

Because of the wide range of its uses, its non-decaying
 qualities, the speed of its growth, and the small outlay of
 expense required to plant and care for it, makes it the most
 profitable timber that can be grown.

THE TIMBER PROBLEM OF THE UNITED STATES.

Daily Twenty-five Thousand Acres of Timber
Consumption are required every twenty-four hours by rail-
 roads, manufacturers and miscellaneous con-
 sumers of the United States. Or, in other words, all the wood
 that twenty-five thousand acres of our native timber can
 supply, is needed to meet the present daily demand. There
 are approximately four hundred billion feet of timber in
 this country. We are consuming it at the rate of twenty-
 five billion feet annually. With all the conservation efforts
 that can be made, as respecting the present timber supply,
 we are bound to face a timber famine in from fifteen to
 twenty years.

Timber The United States Forestry Service, the
Shrinkage most qualified, conservative and accurate
 source of information relative to the timber
 problem that we have, says:



A NATURAL FOREST OF SPECIOSA CATALPA

Largest Growers in the World.

**Past and
Present**

Hardly one hundred years ago the United States east of the Mississippi was an almost unbroken forest comprising something over one million square miles. Now there are not more than 300,000 square miles of merchantable forest land in the eastern United States.—U. S. Department of Agriculture, Circular 159.

“The most notable shrinkage has been in the leading hardwoods to which the public has long been accustomed. Oak, which in 1899 furnished over half the entire output of hardwood lumber, fell off 36.1 per cent. Yellow poplar, which in 1899 was second among hardwoods in quantity produced, fell off 37.9 per cent. Elm, the great standard in slack cooperage, went down 50.8 per cent. Cottonwood and Ash, largely used in many industries, lost, respectively, 36.4 and 20.3 per cent.

The amount of standing hardwoods is uncertain. The largest estimates set the figures for hardwoods at 400 billion feet. If we are using hardwoods at the rate of 25 billion feet per year, this would mean a sixteen years' supply.

HARDWOOD LUMBER MANUFACTURE.

**Blight by
Exhausted
Supply**

Hardwood lumber manufacture affords an example of the damage already done. It has been shown how hardwood lumber production in Ohio was cut down over one half between 1899 and 1906. The decrease in products between 1900 and 1905, according to Census reports, amounted to \$7,212,345, or 57.4 per cent., and the rank of the industry in the State fell from the fourth to the twentieth place. The number of employees fell from 10,689 to 6,442, or 40 per cent.

In Indiana during the same period the lumber industry fell from the third to the eighth place; the value of products decreased 27.1 per cent; the number of wage earners decreased 42.6 per cent. and the wages paid decreased 36.6 per cent.

Lumber manufacturing is the first among the industries to feel the blight of an exhausted timber supply. When the local supply ceases this industry must stop. Most other industries which use hardwoods can go on, bringing their supplies from a distance. Only with the failure of the entire supply are they seriously damaged.

Cooperage.

**Will Destroy
Industries**

In much the same way the cooperage industry must be near the forest. Slack cooperage employs a great many hardwoods and is distributed through many states. Tight cooperage makes use of the best grades of white oak almost exclusively and centers in Kentucky and Tennessee. The pressure of the timber supply is already heavy on this industry. If the oak supply should fail, the tight cooperage in-

dustury will largely cease, and some other container for liquids will have to be found to replace wood. As yet little progress has been made in securing substitutes for the oak cask and barrel.

Furniture Making.

20 Per Cent Entire Production.

The manufacture of furniture probably calls for more hardwood than any other industry, and employs hardwood almost exclusively as raw material. In 1905 there were 2,482 furniture establishments in the United States, with a capital of \$153,000,000 and an annual product valued at \$170,000,000. In reports made to the Forest Service 538 of these establishments reported the annual use of 580 million feet of lumber. It seems probable that the industry requires upward of 20 per cent of the entire hardwood production. The public is so much accustomed to hardwood furniture that furniture of any other material would not be acceptable. Failure of the hardwood supply would doubtless terminate the furniture industry as it is now carried on.

Vehicle Manufacture.

Only Ten Years Supply

In 1905 there were in the United States 5,143 establishments for the manufacture of vehicles, with a capital of \$149,000,000 and a yearly product of \$155,000,000. No industry stands in a more threatened position, so far as supply is concerned, than the manufacture of wagons and carriages. It requires the best hardwoods, and even now these are obtained with extreme difficulty. Hickory and oak are used in the largest quantities and vehicle manufacturers believe that the hickory supply of the country cannot last over ten years longer. Attempts to substitute other woods or other materials for hickory in vehicle manufacture have largely failed. The vehicle industry, like the furniture industry, cannot exist on its present basis without hardwood timber.

Railroad Ties.

50 Per Cent Hardwood

Hardwoods have been, and still are, most essential for railroad ties. Half of the hundred million ties used annually are of hardwood. Hundreds of patents exist for ties of other material. None has commended itself to railroads as a general substitute for the wood tie. Very large quantities of hardwood are likewise used for bridges and trestle work.

Telephone and Other Poles.

Hardwood Demand.

The pole lines of the country have also called for a great deal of hardwood timber. Every year the demand is increasing. No other material has proved so satisfactory for the support of the net work of wires which now binds together every part of the country.

Largest Growers in the World.

House Finishing.

Hardwood for Finishing.

House finishing, including interior woodwork, doors, window sashes, stair work and mantels, consumes each year a great deal of hardwood. For durability and acceptability hardwood finds here one of its most desirable uses. In well-built houses in many parts of the country hardwood finishing is almost as commonly found as is hardwood furniture.

Situation Concerns Entire Country.

Failure of Hardwoods.

How intensely the whole country would feel the loss of its hardwood timber to an ample supply of which it has long been accustomed, can scarcely be realized. Without hardwood for building purposes, for railroad ties, for the manufacture of furniture, cooperage, and vehicles, and for the varied other uses to which it is put, we should be in sad straits indeed. A general failure in crops may affect industrial conditions for a few years—a failure in the hardwood supply would be a blight upon our industries through more than a generation.

The situation in brief is this: We have apparently about a fifteen years' supply of hardwood lumber now ready to cut. Of the four great hardwood regions, the Ohio Valley States have been almost completely turned into Agricultural States, and the Lake States and the Lower Mississippi Valley are rapidly following their example.

In the Appalachian mountains we have extensive hardwood lands which have been culled and greatly damaged by fire. These are practically all in private hands, and while they contain a large amount of inferior young timber, they are receiving little or no protection, and even such young timber as exists is making but slight growth. Even if these cut-over lands be rightly managed they cannot greatly increase their yield of merchantable timber inside of from thirty to forty years.

Hardwood Famine Without Provision.

The inevitable conclusion is that there are lean years close ahead in the use of hardwood timber. There is sure to be a gap between the supply which exists and the supply which will have to be provided. How large that gap will be depends upon how soon and how effectively we begin to make provision for the future supply. The present indications are that in spite of the best we can do there will be a shortage of hardwoods running through at least fifteen years. How acute that shortage may become and how serious a check it will put upon the industries concerned cannot now be foretold. That it will strike at the very foundation of some of the country's most important industries is unquestionable. This much is true beyond doubt, that we are dangerously near a hardwood famine and have made no provision against it.

U. S. Dept. of Agriculture, Circular 116.

NOTE—The Department of Agriculture considers Maple, Poplar, Red Gum, Basswood, Birch, Beech, Elm, Cottonwood and others in the hardwood class.

DEMANDS FOR TIMBER.

Sixty-Three Million Annually in Cross Ties and Posts.

The purchases of cross-ties by steam and street railroads of the United States during the year 1906 amounted to 102,834,042, valued at \$48,819,124, an average of 47 cents per tie.

NOTE—Oak furnished 45,357,874 of the total number and Southern Pines 18,841,210, or in other words 62 per cent of these ties from woods that soon will be exhausted.

Annual output of Forest products in year 1906, taken from Forestry Bulletin, No. 77.

Kind—	Value
Lumber	\$650,000,000
Cross-ties	48,819,124
Cooperage stock	32,000,000
Pulp wood	15,000,000
Mine timbers	7,500,000
Timber exported	5,000,000
Posts, piles, etc	15,000,000
Firewood	350,000,000
Other products	2,500 000
Total	\$1,125,819,124

No Substitute for Wood.

The foregoing statistics, which are insurmountable, show the great need of something being done to avoid the threatening timber famine. That we could get along without timber, is out of the question—it is impossible. In some ways, we can find substitutes, such as steel and cement; but there are hundreds of uses, and they are constantly increasing, which wood, and wood alone, will answer. In making furniture, cabinet work, telephone and telegraph poles, railway cross-ties, pulp for millions of tons of paper, wood is the only solution.

Soil Conserva- tion Demands Timber.

Timber is necessary to the agricultural success of this country. "A billion tons of earth are swept annually by our rivers into the sea every year—an amount of soil equal to a block one mile square and more than a thousand feet high, weighing as much as the total yearly tonnage carried by all our railroads and river and lake vessels, and valued at not less than a billion dollars. This soil waste is sapping a resource richer than all others combined, save one, our inland waters. It is mainly due to the lack of forests on the



GROVE OF SPECIOSA CATALPA

Grown on poor clay soil near Greenfield, Indiana, 6x6 feet apart

slopes where the rivers rise." What will be the condition, when this country is stripped of all its timber? Look to China and Korea and see the answer.

**The Real
Situation.**

The first step in solving a problem is to face it. The people, the farmers and land-owners, must first realize the situation. The situation is this: A timber famine lasting a generation or more faces us.

THE SOLUTION.

**Large Timber
Plants.**

Numerous plans and solutions have been advanced, all of which have proved inadequate. The annual consumption is from three to four times that of the annual growth. "No one at all familiar with the situation doubts for an instant that we are rapidly using up our forest capital. In fact, it is unquestionably safe to say that our present annual consumption of wood in all forms is from three to four times as great as the annual increment of our forests."—Circular 97 U. S. Forestry Bureau.

We cannot wait for the present forest areas to replenish themselves—as that would require from fifty to two hundred years. We cannot grow the same kind of timber we have been

using, for the same reason. We can curb the present waste, but we cannot stop the use of wood to an extent of one-fourth its present consumption.

The solution, which is recognized by the United States Forestry Service as being the only adequate and practical one, is the wholesale planting of timber by farmers, land-owners, railroad and telephone companies, etc. There must be a great, national conservation effort of forestry planting.



COMMON, WORTHLESS CATALPA TREES—Over 20 years old.

THE SELECTION OF THE TIMBER.

**One Timber
Only Meets
Demand.**

Second only to realizing the present general conditions, is the selection of a timber to meet the requirements. These requirements are, generally speaking, adaptability to a wide range of soils, rapidity of growth, an up-right habit, must be hardy and enduring, impervious to decay,

Largest Growers in the World.

free from checking or warping, capable of taking a good finish, and adapted to a wide variety of uses. In short, it must possess the qualities of the Hardwoods, such as Oak, Hickory, Walnut, etc., and the speed of growth of the Cottonwood or the Soft Maple.

There are numerous hardwoods that would, as far as the wood-qualities are concerned, answer the question. But the slowness of their growth makes them out of the question.

	Years of Age.	Inches in Diameter.
Hackberry	115	25
White elm	120	27
Black oak	148	28
Black willow	50	18
Sassafras	112	19
Sugar maple	155	38
Swamp maple	134	28
Blue ash	273	36
Yellow chestnut oak	186	21
Pot oak	150	20
White oak	261	48
Scrub oak	150	15
Red oak	147	27
Sycamore	260	57
Tulip tree	225	57
Black locust	45	12
Beech	165	36
Hop hornbeam	55	13
Sweet gum	184	34
Sour gum	141	25
Black walnut	189	29
Wild cherry	46	16
Shellbark hickory	120	12
King nut hickory	163	19
Pig nut hickory	110	13
Kentucky coffee	25	5
Spanish oak	220	38
Texas red oak	215	43
White oak	173	33
White oak	312	36
White oak	290	35
White oak	275	35
White oak	297	31
White oak	310	36
White oak	325	41

Will attain a twelve-inch diameter:

Pin oak	40 years
Black locust	40 "
Tulip	50 "
Black oak	50 "
Black walnut	56 "
Texas red oak	58 "
Sweet gum	62 "
Ash	72 "
Hickories	12 "
White oaks	100 "

While all of the above woods require from 40 years up to attain a diameter of 12 inches, Catalpa Speciosa makes an average growth of three-quarters of an inch to an inch in diameter per year. Reaches a diameter of 12 inches in twelve to sixteen years and a diameter of twenty inches in twenty to twenty-five years.

The qualities of the common quick-growing trees obviously place them out of the question as a source for the future lumber supply. There are some quick-growing varieties that possess some of the requisite qualities of the Hardwoods. Only one of them answers the question completely.

THAT IS THE GENUINE SPECIOSA CATALPA.

Speciosa Catalpa

Origin. Used
by Indians.

The original home of the Speciosa Catalpa is in the Wabash bottoms in Indiana. The white settlers coming to that country noticed that the Indians used it in preference to all others in making canoes, as it was light, strong and very durable when in contact with the water and mud and did not crack nor check when exposed to the sun and wind. The white people also used it for posts, staves and boards, and by their using it, is today furnished us a chance to observe the effect of scores of years of wear upon it.

The existence and value of this tree was first made known to the world by General William Henry Harrison in 1801. In 1814, in an address to the farmers of Hamilton County, Ohio, he urged the planting of the Catalpa, and distributed seed from the Wabash valley. In 1853 Dr. John A. Warder, editor of the Western Horticultural Review, again emphasized that there was a distinct type of the Catalpa, viz: Catalpa Speciosa.

Since that time there have been irregular efforts in the cultivation of Catalpa up to within the last ten or fifteen

Largest Growers in the World.

years. There are numerous plantations, some of which we shall speak of further on, that were planted fifteen to thirty years ago, that are today yielding immense returns.

**Profit in Plant-
ing Recognized.**

The apparent, serious timber shortage has within the last few years awakened the entire country to the necessity of averting it, if possible, and the qualities of the *Speciosa Catalpa* having already been proven, railroads, telephone and telegraph companies, land-owners, and farmers are planting it by the thousands of acres all over the country. Post and Pole Companies, several of which are now being formed in this state, are planting it by the wholesale, and it is recognized by keen business men as being one of the most profitable and most stable investments at the present time.



THE BIGNONIOIDES OR WORTHLESS CATALPA
Showing the low, spreading nature.

Vital Necessity of Obtaining Pure, Genuine *Speciosa* Plants.

But the wide-spread planting of *Catalpa* as a solution to the fence-post, pole and lumber problem is in serious danger from the fact of the lack of knowledge among nurserymen and planters of the great difference between the varieties of *Catalpa* and of the absolute necessity of producing the right kind. *Catalpa Speciosa* is the only form of *Catalpa* that has value.

Common

Catalpa

Worthless

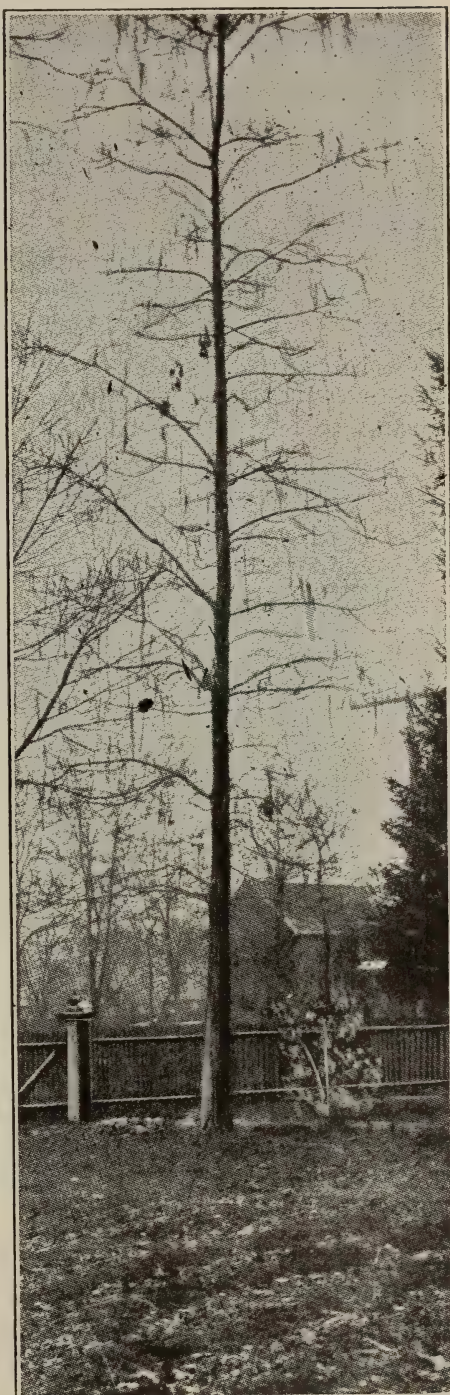
The other varieties, *Bignonioides*, *Koempferii*, etc. are absolutely worthless. This fact cannot be emphasized too much. On the procuring of the genuine *Speciosa Catalpa* depends the future success or failure of the growing of *Speciosa Catalpa* through the country.

"The catalpa has unfortunately been discredited in many localities because of the poor results from early plantation. These were due to the substitution of an inferior species or a hybrid for the true hardy catalpa."—U. S. F. S. Circular 82.

Speciosa Catalpa Compared With Common.

The Speciosa is the only form of Catalpa that has a quick, steady and continuous growth; that has an erect habit; whose wood possesses all the qualities necessary for success in raising it. All other varieties are forms of the common, scrub Catalpa, that has no commercial value whatever; branch low, grow very slowly after three years, and are in no way comparable to the Speciosa. One grove of this scrub kind, a few miles north of this city, is twenty years old, and the trees are not even good for fence-posts because of branching so low.

The Speciosa Catalpa bears seed very sparsely, only two or three pods to the cluster, and very few clusters to the tree. The scrub catalpa is very prolific and bears seed in great quantity. *The common, worthless Catalpa has five times the germinating power of the Speciosa Catalpa.*



Speciosa Catalpa Tree at Provo, Utah.

Following we quote from the November Arboriculture of 1907:

Largest Growers in the World.

In the autumn of 1906 at very great expense I employed 30 men for an entire month, paying high wages, boarding part of the men at hotels, besides paying my own and their traveling expenses. The entire cost was a little over \$2,500. For this outlay of money and labor I secured 1,000 pounds of genuine *Catalpa Speciosa* seed. The most of this was distributed, gratuitously, to all parts of the world.

First I sent a quantity to each botanical garden of the world, next to all societies of forestry in Europe, then from 5 to 10 pounds to each experiment station of the United States and lastly to nearly every prominent nurseryman in America, I sent a generous package for testing with what they have been planting.

At the same time sundry persons in Kansas and Nebraska collected 25,000 pounds (500 million of seeds) which was sold to nurserymen, seed dealers and individuals and this has produced fully 100 million trees.

Responsible persons purchased several hundred samples of this catalpa seed, of a score of dealers and collectors, almost the entire lot of which was *Bignonioides*, *Kempferii* and various hybrid seeds. Scarcely a sample showed *speciosa* characteristics.

Until the public and especially the seed dealers and nurserymen learn to distinguish these various sorts of catalpa and cease collecting seed and growing trees of worthless varieties, it will be uphill work endeavoring to teach the world the value of genuine *Catalpa Speciosa*.

**Danger of
Hybridizing**

The *Speciosa* *Catalpa* seed hybridizes very easily with the common varieties, even to the extent when both kinds are merely in the same locality. It is almost as dangerous to plant the hybridized as it is to plant the common. *Safety and profit lie in planting the pure, genuine Speciosa, only.*

Because of these conditions, the actual cost of obtaining the pure *Speciosa* *Catalpa*, in the very few places that it can be obtained pure, is four to five times that of gathering the common.

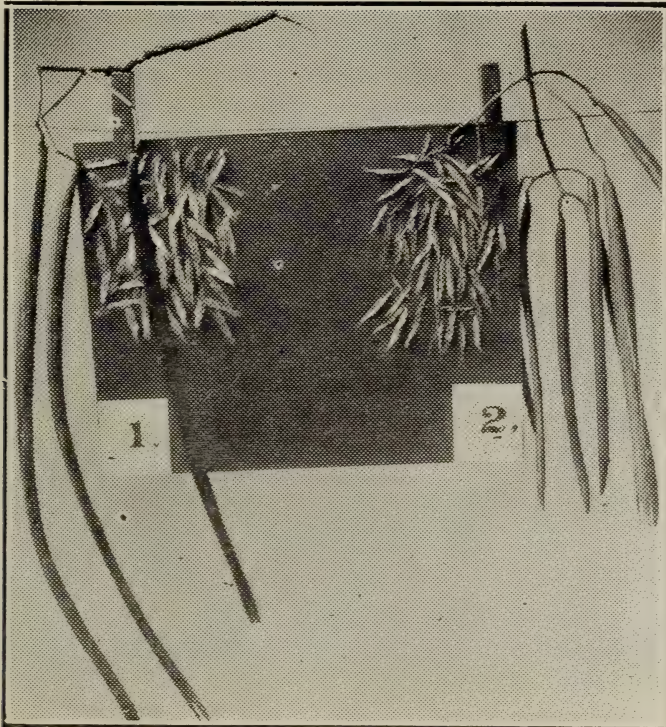
**Large Amounts
of Spurious
Seed.**

For these reasons, the very large part of the seedlings being grown and offered for sale over the country by nurserymen and planters are either the common, scrub varieties or the *hybridized* *Speciosa* *Catalpa*; also, approximately all the seed offered for sale today by seed-houses as the pure *Speciosa* is some form of the common or hybridized varieties. These can be foisted upon the public with impunity as only an expert can detect the difference between the common, the hybridized, and the pure. And after starting to grow, the seedlings, up

to the time they are two or three years of age, cannot be told apart, even by the experts of the government forestry service.

**Damage by
Ignorance.**

This wholesale counterfeiting of the Speciosa Catalpa is due not so much to the malicious intentions of those perpetrating it as it is their woeful ignorance on the subject. Seed houses buy the seed in wholesale quantities from seed-gatherers whose only interest is in the amount of seed they can gather. Nurserymen and planters buy their seed of these seed-houses, who, ignorant as to its real nature, advertise and recommend it as the genuine.



No. 1. Speciosa Catalpa Seed. No. 2. Bignoniodes Catalpa—worthless

CAUTION

Therefore, we would caution our readers to keep the above facts in mind, and buy their seedlings of a firm whose reputation is square; who have made a specialty of this line for years; and who can furnish unquestionable proof as to the genuineness and purity of the seed they plant.

QUALITIES AND USES.

The Speciosa Catalpa presents to the forester the greatest variety of desirable qualities and uses of any known wood. For fence-posts and telegraph and telephone poles, cross-ties,

etc., it possesses the rarely combined qualities of remarkable resistance to decay when in the ground or out, and of holding a nail or steeple or spike without checking or splitting whatever. It requires no artificial treatment as does oak, to keep it from rotting. Its texture is such that it will resist it naturally. It is also remarkably free from disease.

**No Artificial
Treatment
Needed.**

Herman Von Schrenk, Bulletin 37, U. S. Dept of Agri.:

**Lasting
Powers.**

"The Hardy (Speciosa) Catalpa is as a rule free from destructive diseases. Catalpa wood after it is cut from the living tree is one of the most durable timbers known. In spite of its light porous structure it resists the weathering influences, and attacks of the wood-destroying fungus in a remarkable degree. There is no longer any question as to the lasting powers of this wood."

William L. Hall, U. S. Division of Forestry:

**Drought
Resistant.**

A few years trial on the plain sufficed to prove its good qualities for that region. It was easily propagated, grew rapidly on prairie soil, had good form, was drought resistant, had few insects or fungus enemies and above all was a lasting timber, adapted to many uses. Such good qualities soon brought it into general recognition. In the regions named, it took the lead as a commercial tree, especially for such uses as fence posts, telegraph and telephone poles and railroad ties. Its value for most of these purposes have been fully demonstrated. As a post timber it has given excellent satisfaction. It ranks with Black Locust and Osage Orange in durability, while it surpasses them in rate of growth, form, penetrability, and freedom from checking. "The heartwood of the Catalpa forms nearly three-fourths the volume of the entire tree, even at the early age of five and ten years and it is durable in the soil if properly seasoned, regardless to age and rapidly of growth. If we add to its durability, its Rapid Growth, Good Form, Lightness, Strength, Elasticity, immunity from checking or becoming unduly hard. We have an array of good qualities that to many men of experience, place it first among the post timber. * * * The use of posts is enormous, and on the increase. In ten to fifteen years many regions which now have an abundant supply will show a scarcity and prices be high. In such regions it would be profitable to be planting timber even now. From every reasonable point of view it appears that great profits are to be made in the growing of forest trees in the next twenty-five years. Every condition is so favorable that the matters passes from probability to certainty."

E. B. Burney, Car Builder, Dayton, Ohio, wrote:

**Sound Post After
Seventy-Five
Years Use.**

"There is in our office (1887) a Catalpa post taken from post and rail fence in Indiana, that J. S. Miller, Supt., Richmond, Ind., vouches for as having been placed two feet in the ground 75 years ago, where it has remained until quite recently, when it was taken up and sent to me as a sample of the Durability of Catalpa. It is perfectly sound in every part. For railroad cross-ties, it is better than either mulberry or cedar, in fact it may be regarded as imperishable under, or lying on the ground. Mr. R. E. Starnate has measured Catalpa in the White River bottoms, two and one-half, three, and even four and one-half feet in diameter. This timber is universally credited with wonderful powers to resist decay and time. Colonel Cockrum has known it to be in use without stain of decay for fifty years. President Harrison, on his visit to Vincennes in 1840, publicly called attention to the fact that a picket fence built along the river front on his former residence, was in good order after forty years of service. The portion of the post buried in the earth was as sound as if cut yesterday."



A photograph of a catalpa tie in use in the Big Four system for twenty years or more; courtesy of Mr. Geo. W. Kirtledge, Chief Engineer, Big Four:

This tie is still in the office of the Big Four at Cincinnati, Ohio. Mr. J. W. Cowper, Engineer Maintenance of Way, officially reports of this tie as follows:

"This Catalpa tie, taken out of the track three miles north of Harrisburg, Ill., was put in in 1897, in mud ballast. The wood is perfectly solid, showing very little signs of decay. With tie plates and good ballast, these ties would, I think, without doubt, last fully thirty to thirty-five years." Mr. Brown, of Connersville,

Largest Growers in the World.

Indiana, obtained half of this tie and had it sawed into boards, and a frame made and finished to determine its value as a furniture wood. In appearance it resembles white walnut, also similar in texture. It is as easily wrought as white pine; the polish which it received put the Catalpa upon a plane with the walnut, cherry and our finest cabinet woods.

Extract from *Aboriculture*, January, 1909, of an address by John B. Atkinson, Louisville, Kentucky:

Nine Inch Circumference in Four Years. "Personally I know of the value of this tree for railroad ties, fence posts, furniture veneer, mine timbers, house construction and other uses. A tree that grows eighteen feet high in four years from seed, with a circumference of nine and a half inches at the stump, as are found in our catalpa trees, will soon make a telegraph pole."

Extract from Bulletin 108, Kansas Agricultural College:

A further communication from Mr. D. Axtell, superintendent of the Missouri Division of the Iron Mountain railroads, is as follows:

Sound Log After Fifty Years in Swamp In regard to the durability of catalpa it is useless to multiply words. Fence posts twenty years in the ground are always as sound as when first put in, and no decayed catalpa logs are ever found in the swamps. A section of catalpa log known to have lain in the ground in the swamps for fifty years is now in the office of the land department of the roads in St. Louis, and is as sound as it ever was."

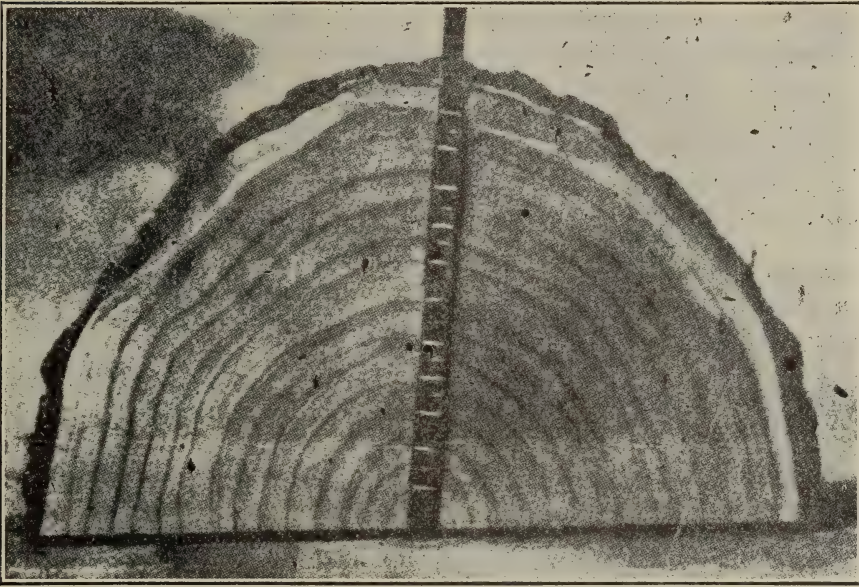
Bulletin 108, Kansas Experiment Station, says:

Free From Decay and Disease. The further advantage of Catalpa for post timber, in addition to its specific resistance to decay, lies in the fact that the wood used does not check or split, allowing staples used in wire fencing to fall out and the wires to fall to the ground. For telegraph and telephone lines the advantages of wood so resistant to decay as Catalpa is sufficiently obvious. Wood of the Catalpa is remarkable for durability in contact with the soil. Well authenticated and reliable observations give a record of one hundred years for board timber, in large, mature specimens. The immunity of Catalpa wood to decay means the existence of certain chemical compounds in the tissue which render them antiseptic to saprophytic fungi. The presence of this compound or compounds likewise renders the living tree remarkably free from plant disease caused by parasitic organisms."

William Arthur, Superintendent of the Illinois Central R. R., states:

**Fine Texture,
Brilliant
Polish.**

"The rapid growth of Catalpa in almost every situation in which it can be placed in the Middle States and the adaptation of its wood to fence posts and other useful purposes, making it deserving of the attention of farmers. The wood, though light, is compact, of fine texture, susceptible of the most brilliant polish, is fine straw color, produces a fine effect in cabinet work and inside finish for houses."



CROSS SECTION OF 16-YEAR-OLD SPECIOSA CATALPA
21 inches in diameter

Great Age of

Ties and Posts.

Speaking of Catalpa trees, states: "The tree under favorable circumstances, makes a very rapid growth. Posts have been known to last 100 years. Railroad ties have been examined after fifteen years of hard service still in good condition." These examples of remarkable durability might be extended indefinitely. Without doubt, therefore, one may say that for fence posts this wood has no equal, and in view of the fact that it can be grown so easily, it ought not to require much argument to cause investors to plant Catalpa where it will grow to the best advantage. The same is true of telegraph poles. Wherever trees can be grown straight and tall enough it will be found that they will serve as poles lasting longer than almost any other class of timber. For ties the same is true.

Largest Growers in the World.

15-Year-Old Grove, 50 to 80 Feet High. Experience has demonstrated this tree to have a special value for extended planting. In Cedar County there are trees which have been out ten to fifteen years, which show its habit of rapid growth to continue after it has attained considerable size, growing from fifty to eighty feet in height with a diameter of from eighteen to twenty-five inches.

That the Catalpa wood makes a tie for railroads that would last forever. That it is easily cultivated and of rapid growth. When planted in groves it grows straight and tall as any forest tree; he had several groves growing on his land that had been planted four years and were twenty feet high; that he had planted them for fence posts but subsequently found they would hold spikes as well as oak and would not split, hence their value for cross ties. He states that he saw a catalpa gate post which had been put in position forty years previously. He dug around it and examined it closely and found it as sound as the day it was planted.. No signs of decay at all."

Example of Genuine Speciosa Catalpa.

We have in our office at the present time a post taken from the grove of J. E. Smith, Frederick, Oklahoma, which was three years old last May. This post is ten feet high, four and one-half inches in diameter at the base, and is two inches and a half in diameter at a height of six feet; the post is straight, smooth and round. This grove has at the present time a great number of posts, like the above, ample large for fence posts. Stumps from which some of these posts were cut from have this summer sent up the second sprout fifteen or eighteen feet high, and an inch to an inch and a half in diameter. This is simply an ordinary instance of numerous groves in Oklahoma.

Thus it will be seen that Speciosa Catalpa will, in fairly good soil and with reasonable care, make good fence posts in from four to six years, and will grow into telephone or telegraph pole or cross-tie size in from eight to fifteen years, and greatly enhance the sale value of land annually.

Solves Post, Pole and Cross-Tie Problem.

The foregoing quotations, which are but few of many, will show beyond doubt that the properties of Speciosa Catalpa are such that it will completely meet all the requirements of the fence-post, telephone and telegraph pole, and railroad cross-tie problem.

Has All Qualities of Hardwood Lumber.

But the utility of the Speciosa Catalpa by no means ends here, as there is an almost unlimited field, which it is entirely qualified to occupy. This is in supplying the demand which the Hardwoods, such as Walnut, Mahogany, Oak, etc.

fulfill today. That these will be exhausted in the next few years, we have previously shown. That Speciosa Catalpa is equal to any of them has been proven conclusively by the severe tests to which it has been subjected.

Sample of Polished Lumber. We have in our office at the present time samples of lumber taken from logs twenty-four feet long, from trees that were planted in the nineties. These logs cut into lumber gave boards eleven inches in diameter, an even, fine texture, absolutely free from any insect or decay whatever. A beautiful piece of lumber, with clear, rich grain, light, but compact, and on being polished presents a superb finish.

Extracts from Arboriculture, edited by Mr. John P. Brown:

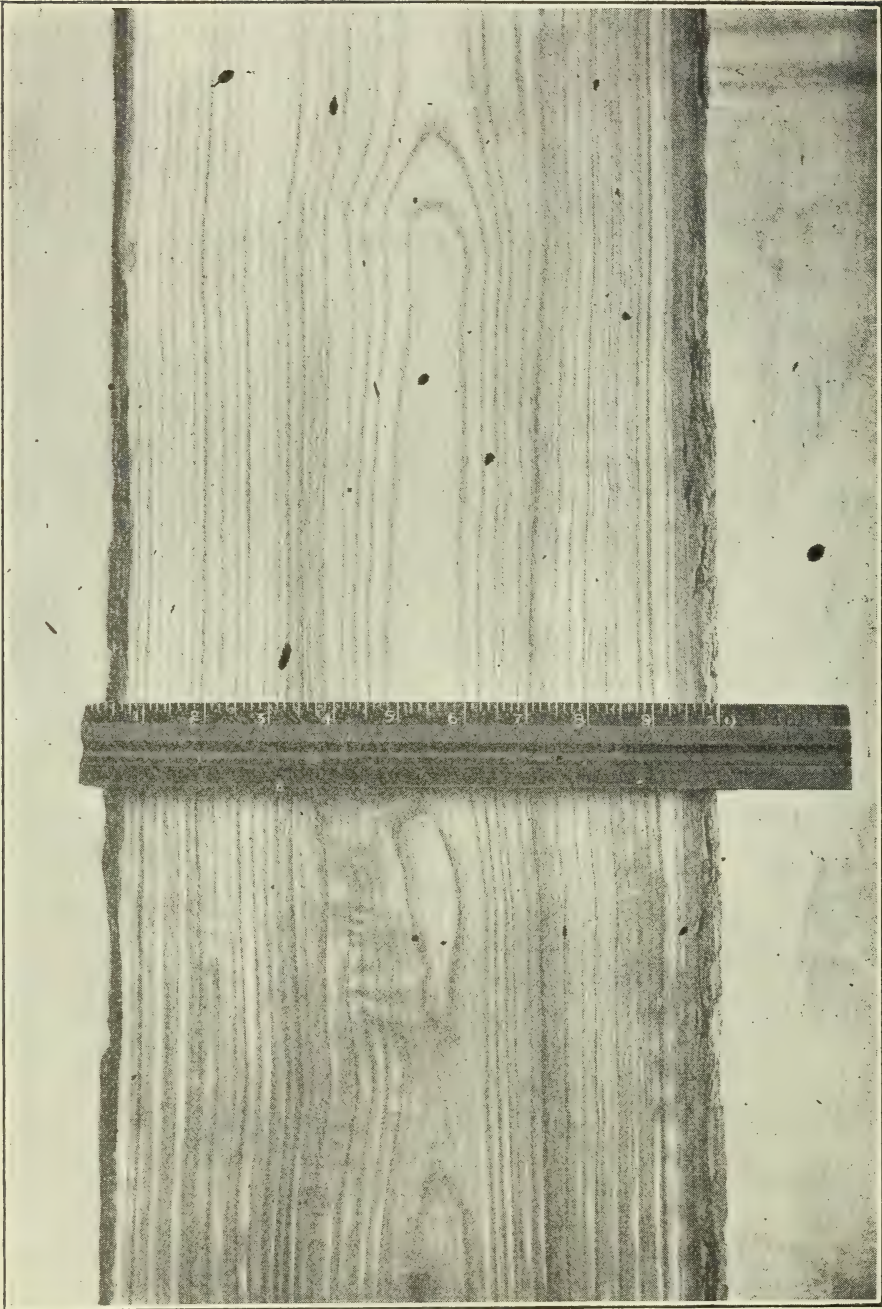
Chemical Properties Preserve. "Catalpa is permanently protected because nature has enabled the tree to make its antiseptic a part of the wood itself. Usually these woods which are dense, slow to mature have great durability, while quick growing trees with softer wood would soon perish. The reverse is the case with Catalpa, its chemical constituents being permanent antiseptics, preserve the fibers from decay."

Fine Grain. It compares with the butternut in texture and appearance, and is suitable for any purpose for which the walnut and butternut are suited. Its color is a handsome shade of brown. The somewhat open grain absorbs the finisher's "filling," and is capable of being used for imitation of many woods, if desired, yet in its natural state it is equal to any American wood." It is especially beautiful for interior finish of railroad coaches, and makes one of the most artistic pieces of woodwork to be found anywhere. The lumber is also suited for inside finishing for dwellings and all kind of furniture, especially the medium grades. As a base for veneering it has a special value, as it neither swells nor shrinks with changes of weather, while glue clings to it with tenacity. It will be sought after for interior finish of fine buildings, it is almost as easily wrought as white pine, and much richer in grain and color.

Of Great Value for Finishing and Cabinet Work. The Farmers' and Planters' Encyclopedia says:
* * * The wood though light, is very compact, of fine texture, susceptible of the most brilliant polish. Is fine straw color, produces a fine effect in cabinet work and finish for houses.

Dr. John A. Warder, North Bend, Ohio, formerly President of the United States Horticultural Society, said:

Beautiful Lumber. We may be encouraged to plant Catalpa largely on account of its rapidity of growth and the good qualities of its timber. That the wood would be exceedingly valuable for lumber is demonstrated by the occasional



SAMPLE OF SPECIOSA CATALPA LUMBER

Now on exhibition in our office. This lumber has an excellent grain and takes a superb finish.

The Winfield Nursery Company.

specimens that have been sawed, finished, and made into furniture. The open grain of the wood enables it to take a filler easily, while in color and marking there is scarcely a more beautiful lumber product. So well satisfied am I of the great durability of the Catalpa, the

Would Plant

160 Acres.

fine polish it will take, its great beauty as a cabinet wood, and its value for railroad purposes, that I wish myself a young man, and that I might plant a quarter section in Catalpas."

GREAT PROFIT IN CATALPA PLANTING.

A Profitable Investment.

That the Speciosa Catalpa will meet all the requirements as far as qualities are concerned, the foregoing pages prove beyond question. That the demand for and price of posts, poles and lumber cannot help but become greater, the statistics given heretofore from the Bulletins of the United States Agricultural Department demonstrate completely. What investment could be more profitable or more sure of profit than to invest in an article which is absolutely necessary to our needs; an article, the consumption of which is increasing at a rapid gait; an article, which has no substitute in the most extensive ways in which it is used, and for the use of which many new devices are being made yearly. The statement of the Chief of the Forestry Bureau is that the

Safe and Increasingly Profitable.

United States has reached the maximum of its productions with its present supply; that the demands of the future will be greater because of the extension of railroads, telephone lines, the range of agricultural lands, etc. Can any one see any probability, or even possibility, of a clog in the market? To plant land to timber, and on a large scale, is one of the surest investments conceivable for the future.

Rapid Second Growth

The cultivation of Speciosa Catalpa presents another great advantage. After the first harvest is made, the second growth from the old stump will furnish a post, pole, or cross-tie equal in every way to the first one, and will grow in two-thirds the time. That is, if a post is cut at the end of the sixth year, the stump will produce another post equal to the first in approximately four years.

One Acre Equal to Twenty

Necessarily in the irregular growth of the native forest, land was not utilized to best advantage. Careful observation and experience prove that with proper care one acre of land planted to timber will produce the equal of twenty acres of native forests. Or in other words, if the forests of today, growing wild, had been planted systematically and regularly,

they would produce twenty times the amount that they are now producing. Figure what standing timber is worth to-day, multiply it by twenty and the figures will astonish you.

All of the following figures, except the first instance, are taken from the Reports of the U. S. Department of Forestry:

Robinson's Plantation.

**\$5000 from
20 Acres.**

This entire plantation of 20 acres was harvested in January and February, 1906. The owner kept a strict account of all expenses incurred in establishing, maintaining, and harvesting the plantation, as well as all proceeds, and the figures following are taken from his records:

Expenditure Per Acre.

Interest on \$21.59 for time since planting at 5 per cent compounded	\$26.34
Cutting and marketing	61.90
Total expenses for growing and harvesting the plantation per acre	\$109.83

Receipts from the Twenty Acres.

The actual material sold and the receipts from the same are as follows:

31,397 third class posts at 5c	\$1,569.85
17,340 second class posts at 10c	1,734.90
4,268 first class posts at 12½c	533.50
270 first class posts at 15c	40.50
211 eight-foot posts at 20c	42.50
9 ten-foot posts at 25c	2.25
4 ten-foot posts at 30c	1.20
208 ten-foot posts at 35c	90.30
41 twelve-foot posts at 40c	16.40
167 fourteen and sixteen-foot posts at 50c	83.50

Total for posts and poles	4,114.60
214 cords of wood at \$5.25 per cord	1,123.50

Total income for 20 acres \$5,238.10

Could Have Done Better says: "I am well pleased with the result. It has been the source of a great deal of pleasure and very little bother or worry—yes, I did worry last fall for fear that I might not find a market for my stuff, but now I worry because I cannot supply the demand for my posts. I could sell sixty thousand this season if I had them. If I had it to do over again I could realize quite a little more for the same timber. I should have had fifteen cents for the posts which sold for twelve and one-half cents. I also found a good sale for ten-foot posts for stables and

sheds, and could have sold several thousand fourteen and sixteen-foot poles for sheds and cross-country telephone poles.

Munger Plantation. A study of the Munger plantation, located in Kansas, was made in 1900 by the Division of Forestry. The plantation was made in 1887 and consists of 135 acres of Hardy (Speciosa) Catalpa. The estimated gross value placed upon this plantation the 13th year was \$252.67 per acre, or \$34,029.00, timber value of entire forest. Mr. Munger began selling posts from the plantation when the trees were nine years old, at a rate equal to \$20.00 per cord for his timber.

The Farlington Forest, Kansas, was begun in 1877, 45 acres were planted that year, 75 were set in 1879, 25 acres in 1880, and 125 acres in 1881, and over 100 acres in 1882. A study of the plantation was made by the U. S. Division of Forestry during the years 1900-01 This plantation consisted of 400 acres Hardy (Speciosa) Catalpa, its estimated timber value was \$156,084.

The Yaggy Plantation was begun in 1890 and completed in 1892, containing over 400 acres of Catalpa. The U. S. Division of Forestry made an estimate of its value by careful measurement in the spring of 1902. The gross value of the 1890 planting was estimated at \$315.15 per acre. At this rate the 400 acres in 1902, would have a timber value of \$126,000 in round numbers, the plantation being twelve years old.

The Hunnewell Plantation was begun in 1880 and finished in 1884, consisting of 400 acres of Catalpa. The U. S. Division of Forestry made a study of this plantation in 1900-01 and estimated the gross value at \$376.30 per acre, giving to the whole plantation a timber value of \$150,520.00 for 400 acres. The foregoing values were based upon the price of posts and telephone poles prevailing at the time when the study was made.

500 acres Catalpa treesL. W. Yaggy, Pres.
6,000 peach trees in bearingE. E. Yaggy, Vice-Pres.
80,000 apple trees in bearingA. F. Yaggy, Sec.-Treas.

THE YAGGY PLANTATION.

Plantation Located at Yaggy Station, Kans.

Hutchinson, Kan. Jan. 21, 1910.

O. C. Cook, Esq.,

Care Winfield Nursery Co.

Winfield, Kans.

Dear Sir—

Answering your inquiry of recent date relative to Catalpa growing as an investment.

After some 20 years experience in that line of business can say we know of no investment that combines such security with such certain large returns, all this with a minimum of worry and atten-

Largest Growers in the World.

tion. The grower of a Catalpa plantation is one of the few men who can contemplate with any degree of satisfaction the rapidly diminishing lumber supply of the country, for his property is being constantly enhanced in value thereby.

With one thousand acres of fairly good land located anywhere in the rainbelt (where a reasonable amount of moisture is available) we should plant at least nine hundred of it in catalpa trees in preference to any other crop we know of. And I question whether we would not afterward plant the remaining hundred acres to Catalpa also.

A poor soil, or deficient water supply will result in disappointment to the planter of Catalpas.



Sample of ordinary posts cut from Yaggy plantation at Hutchinson, Kansas.

We are handing you herewith a number of "Country Life in America," an article on our Catalpa plantation. While the article is a little facetious in spots, the facts contained are substantially correct. We have every reason to believe that catalpa growing will be more profitable in the future than it has been in the past 20 years.

THE YAGGY PLANTATION COMPANY.

The Winfield Nursery Company.

PLANTING, CARE AND CULTIVATION.

**Adaptability
and Extensive
Area.**

Catalpa Speciosa is remarkable for the wide range of territory in which it can be grown successfully, and the varieties of soil in which it will flourish. Originated in such a small region as the Wabash valley, it can be transplanted long distances and still retain all its native vigor and characteristics. It has been cultivated successfully in Maine, in Canada, and in Mexico, on the plains and on the Pacific slope. The belts, however, in which it has thus far been grown most extensively are Indiana, Kentucky, Illinois, Southern Iowa, Nebraska, Kansas, Oklahoma, and Missouri. As a rule, it will flourish anywhere, where the water supply is sufficient for its needs, and the soil is favorable.

U. S. Dept. of Ag. Forestry Service, Circular 82 (1907):

"The Hardy (Speciosa) Catalpa has been planted as far north as Turner County, in South Dakota, Southern Minnesota, Southern Michigan, and Southern Massachusetts, and westward to Eastern Nebraska, Central Kansas and Central Oklahoma. It has done well on irrigated lands in New Mexico, Colorado and Utah, at the lower altitudes, and where the soil is free from alkali. The present range for economic planting is on the fertile alluvial lands of the Middle West south of the forty-first parallel of latitude. Catalpa plantations have been especially successful in the southern portion of Ohio, Illinois and Indiana; in Nebraska south of the Platte river and east of Adams County, and in Eastern Kansas."

Soil Suitable.

Catalpa requires a fairly good quality and richness of soil for good growth. It flourishes on prairie soils, even if there is considerable sand, provided the water supply is sufficient. Also succeeds in poor sandy belts and gumbo, though harder to start and slower in growth until it penetrates gumbo strata. However if a layer of clay which is not too heavy occurs beneath several feet of good soil it is of advantage, since it forms a beneficial soil foundation, retaining fertility and moisture. In fact, *the quality of soil that is favorable to the growing of corn is best adapted to the growing of catalpa.* However, catalpa will succeed on land which might grow good corn, as far as the quality of the soil is concerned, but the rainfall is irregular.

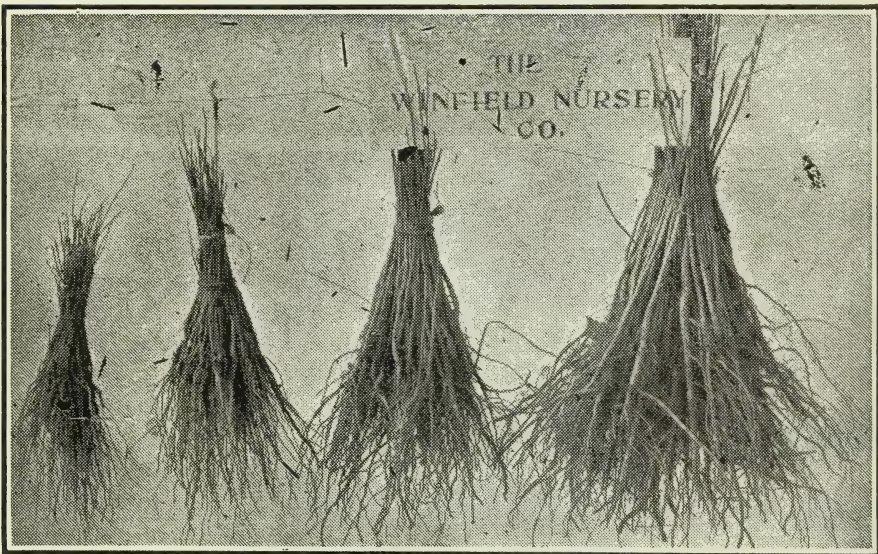
**Moisture
Requirements.**

Catalpa Speciosa requires on an average a rainfall of 20 to 25 inches per year. That much is ample for good growth. However, it will stand any amount and flourish. That is, do not hesitate to plant catalpa, whatever your annual rainfall is, providing that it reaches about twenty inches per year. It will flourish, however, in sections where the rainfall is less

than this, providing there are frequent overflows or there is a water table or permanent water within ten or fifteen feet of the surface where it can send its roots down to water.

**Gold Mine for
Overflow
Bottoms.**

Speciosa Catalpa is the greatest boon to the farmer there is, who owns rich bottom land which overflows frequently, thus making other crops unprofitable. Overflow will not hurt it, even if covered completely, providing it is for not too long a time. In sections of Oklahoma it has been known to be completely under water for five days continuously, and not be damaged. On the other hand, overflow enriches the soil.



One Year Old *Speciosa Catalpa* Seedlings Graded.

**Preparation of
Ground for
Planting**

In planting, ground should be prepared as for any ordinary crop, plowed and pulverized to a fair degree. Then cross-mark the land for distances desired to plant (table of distances is given further on). This can be done by running lines, or by running light furrows, or any other convenient plan. Let the intersections of lines mark places for setting. After ground is ready and places marked for setting, take seedlings to field in a wagon—a goodly number can be taken at a time—but keep them well covered with damp straw or chaff, and shaded or protected from the drying wind or sun. It is well to dip them in water or moisten them before planting. Planting should be done when ground is in good tillable condition. Do not plant in mud or work ground too wet. Should be in same condition that is best for any other agricultural crop.

Directions for Planting First cut tips of roots off with sharp spade or cutting box. The best and easiest way to plant is as follows: At the places marked for setting, insert a spade full depth, push forward considerably, and insert seedling behind spade to a depth that will leave it planted about three inches deeper than it grew in the nursery; then withdraw spade, and insert about four inches away from the place inserted the first time, and push dirt towards seedling. Then tramp the dirt in the second spade hole.

Cutting Back After One Year. During the first year, trees should be cultivated as any other crop. Other cultivated crops may be grown profitably between the rows, especially potatoes, corn or root crops.

After the first years growth from seedling, trees should be cut back to the ground. This should be done in the early spring, about March, after the frost is out of the ground and the sap has begun to start up in the tree. This can be done very rapidly with a large hawk-bill pruning knife, one man cutting back about two acres a day. After this is done, several sprouts may start from the stump. Rub off at once, while easily done, all but the strongest one. This one sprout will grow to a height of ten or fifteen feet the first season. No pruning is required except to keep these sprouts rubbed off in early spring. Usually two sproutings are sufficient. After thus starting the dense foliage will cause what is known as self-pruning.

After two to four years' care, the forest can be depended upon to take care of itself until time for harvest.

DISTANCES TO PLANT.

For planting, for best results, we recommend any of the following plants. For rich and medium rich soils we would recommend the first plan. The others proportionately as to the capacity of the soil to support them:

4	feet	by	7	feet,	1555	trees	per	acre
4	"	"	8	"	1360	"	"	"
5	"	"	7	"	1244	"	"	"
5	"	"	8	"	1080	"	"	"
6	"	"	6	"	1210	"	"	"
6	"	"	7	"	1038	"	"	"

OUR BUSINESS IS THE GROWING OF GENUINE SPECIOSA CATALPA.

Twenty years ago our attention was attracted to the Speciosa Catalpa and its possibilities. For ten years we studied it and investigated it thoroughly from every side. Then we

adopted it. For ten years we have been growing it, greatly increasing our plant every year, watching it closely, and studying the new fields that have opened up to it every year. Today we can say that we have never been disappointed in the Genuine Speciosa Catalpa.

The president of this Company has made the study of Speciosa Catalpa a specialty for the past ten years. In fact, we are recognized as one of the best authorities in the west on this subject, by leading foresters and horticulturists. Editors from Massachusetts to Texas have called upon us for articles of authority on Speciosa Catalpa.

That it is our business is attested by the fact that we are growing over FIVE MILLION SPECIOSA CATALPA this year,



Over One Million Pure Speciosa Catalpa in this Field Alone, Grown by
The Winfield Nursery Co.

every one of which is a genuine, pure Speciosa Catalpa plant. We have been ten years arriving at this acreage. Next year it will be larger. Large as this amount is, we never as yet have been able to obtain as large an amount of seed of the high quality that we require, as we have wished to plant, in order to meet the demand. Every plant that we make is from seed that has passed our own rigid inspection, and is then submitted to the United States Bureau of Dendrology—the highest authority in the world—for final examination. Their verdict is found elsewhere in these pages.

We do not attempt to compete in price with the great mass of Catalpa that is advertised and sold as Speciosa Catalpa at

a cheap price. We cannot grow the genuine article in competition with the hybridized or scrub catalpa—neither can any one else. Paramount with us is purity and genuineness. Then we add a reasonable profit, and charge a price accordingly, and stick to it. As a result we have never been troubled with a surplus of Speciosa Catalpa.

For the seed that we buy we pay four to five times the price that common, scrub catalpa seed brings. The one can be knocked from trees with a rake and gathered by children. The other requires the services of a daring telephone lineman. But this is only half—the germinating power of the Speciosa is only one-fourth that of the common catalpa. That is, from a given amount of seed, only one fourth as many plants will be produced. However, that is not the hardest obstacle to overcome. Three-fourths of the samples of seed submitted to us from original collectors we have to reject—even if there is but a slight hybridization, as there is in many cases.

The United States Bureau of Dendrology writes as follows, concerning the seed which we submitted to them for final examination:

United States Department of Agriculture
Forest Service

Office of the Forester
Dendrology

Washington, February 6, 1909.

The Winfield Nursery Company,
Winfield, Kansas.

Dear Sirs:—

Your communication of January 27 has come to this office. *together with the sample of seed send for identification. The seed is genuine Hardy Catalpa, Catalpa Speciosa and of the most typical form.*

I shall be very glad to identify catalpa and other tree seeds, whenever you may desire to send them. The Forest Service is particularly anxious to be as helpful as possible to tree planters in enabling them to get tree seeds true to name. We find that both seed dealers and tree planters are having much difficulty in getting genuine hardy Catalpa seed. The market supply, unknown to dealers and frequently to collectors, is very likely to be a mixture of from two to three different species of Catalpa seed. As a help to the trade and tree planters, an illustrated publication is being prepared, and I hope it will be of assistance in helping users of Catalpa seeds to distinguish the different species and varieties.

Very truly yours,

G. B. SUDWORTH,
Dendrologist.

Advantages in Growing Catalpa

1. By 1920 American forests will be exterminated.
2. The only valuable tree that will mature in time.
3. Is antiseptic, requires no chemical treatment.
4. It grows in almost any soil.
5. Is easily propagated and managed.
6. Demands no professional manipulation.
7. Most durable wood known.
8. Valuable for cross-ties; have endured half a century.
9. Nothing better for telegraph poles.
10. Miles of living trees used for telegraph lines.
11. Makes magnificent veneers.
12. Superior to oak for furniture.
13. Lighter than pine.
14. Stronger than oak.
15. Tougher than hickory.
16. Freedom from warping.
17. Neither shrinks nor swells.
18. Makes best wood pulp and book paper.
19. Immense yield per acre.
20. Excels for building material.
21. Equals walnut for carving.
22. Makes good fence posts.
23. For mine timbers not surpassed.
24. Ideal wood for shingles.
25. Every quality for interior house finishing.
26. Good plow beams and handles.
27. Used during centuries for boat building by Indians.
28. Suitable for all car construction.
29. Once planted becomes a perpetual forest.
30. Qualities of Ash for agricultural implements.
31. Blocks are used for wood engraving.
32. Strong and durable piling timber.
33. Will produce cross-ties at 20 cents each.
34. Less insect enemies than other trees.
35. Fewer diseases than other timber trees.
36. Quick growth for wind break.
37. A desirable shade trees.
38. Beautiful flowers for ornament.
39. Roots never clog sewers.
40. Practically all uses for which wood is adapted.
—Arboriculture.
41. It is the most rapid growing tree in America that possesses economic value.

42. A greater quantity of valuable wood may be produced upon a given area in a specified time than from any other American tree.

43. The roots are strong, vigorous, large and deep, extending far in every direction, holding so firmly in the earth that storms do not blow them over. I never knew a Catalpa to be blown over by a storm.

44. Because the loss of a great forest area on the Western plains has changed climatic conditions, causing an aridity, which has made millions of acres of the richest soil in the world valueless for want of water.

45. Because experiments in forest farming prove that growing of trees for lumber and posts is profitable where other crops do not pay fair returns.

46. Because it is wise for land owners to plant a part of their farms to timber and raise their own posts and such other timber as they need.

47. Because the actual results go to prove that timber growing for profit gives better results than any other farm product.

48. Because the waste of soil erosion is greatly lessened, and often checked entirely, by the trunks and roots of trees.

49. Because while the lands remain covered with trees the annual deposit of leaves enriches the soil and contributes to the fertility of the lower fields.

50. Because Catalpa is not hurt by overflow and will make very valuable the thousands of acres subject to over-flow and not profitable for growing grain crops.

Kildare, Okla., Feb. 7, 1910.

Winfield Nurseries,

Gentlemen:

Replying to your questions will say I have 50,000 forest trees consisting of Walnut, Mulberry, Black Locust and Catalpa (Speciosa), ranging from 3 to 10 years old and highly recommend planting of the latter as I have 3-year-olds that will make a good post and older ones that will measure 3 feet in circumference one foot from ground, make a No. 1 telephone pole or cross-tie.

Yours for more timber

JOSEPH DEMINSKI,

R. R. 1.

(Catalpa seedlings in above grove were purchased from us).

Special Service

We will pass on purity of seed submitted to us or advise and plan free of charge to prospective planters of forests. Personal visits for examination of lands, without cost, for large planters.

The Winfield Nursery Company

(INC.)

J. MONGRIEF, Pres.

E. S. MONGRIEF, Vice-Pres.

R. I. LEMON, Sec.-Treas.

WINFIELD, KANSAS

No Possible Overproduction

The impossibility of over-production is one of the strongest features of the industry. It would require the planting of over 7000 acres every day for ten years to supply the present national consumption of hardwoods.

Catalpa a Necessity

The grower of Speciosa Catalpa produces a necessity—one that is now being consumed nearly five times faster than it is growing—a necessity that soon will be the greatest need of the country, and the price of hardwoods must continue to advance as the supply grows less and the demand increases.

Speciosa Catalpa for Overflow Land

Winfield, Kansas, Feb. 12, 1910.

The Winfield Nursery Co.,
Winfield, Kansas.

Dear Sirs:—

In the summer of 1908 I was foreman for P. H. Albright & Co., in the planting of 250 acres of Speciosa Catalpa, which plants were procured from the Winfield Nursery Co.

During the summer after planting, a large number of these plants were completely under water for a period of six weeks without injury to the plants whatever. After the water went down the plants grew without any loss whatever from the flood.

Last spring we cut a few of these plants to the ground and this year's sprouts made a large growth. I noticed one of them particularly. It is straight as an arrow, seventeen feet high and as large as my wrist.

(Signed) J. D. HENDERSON.